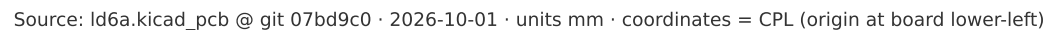
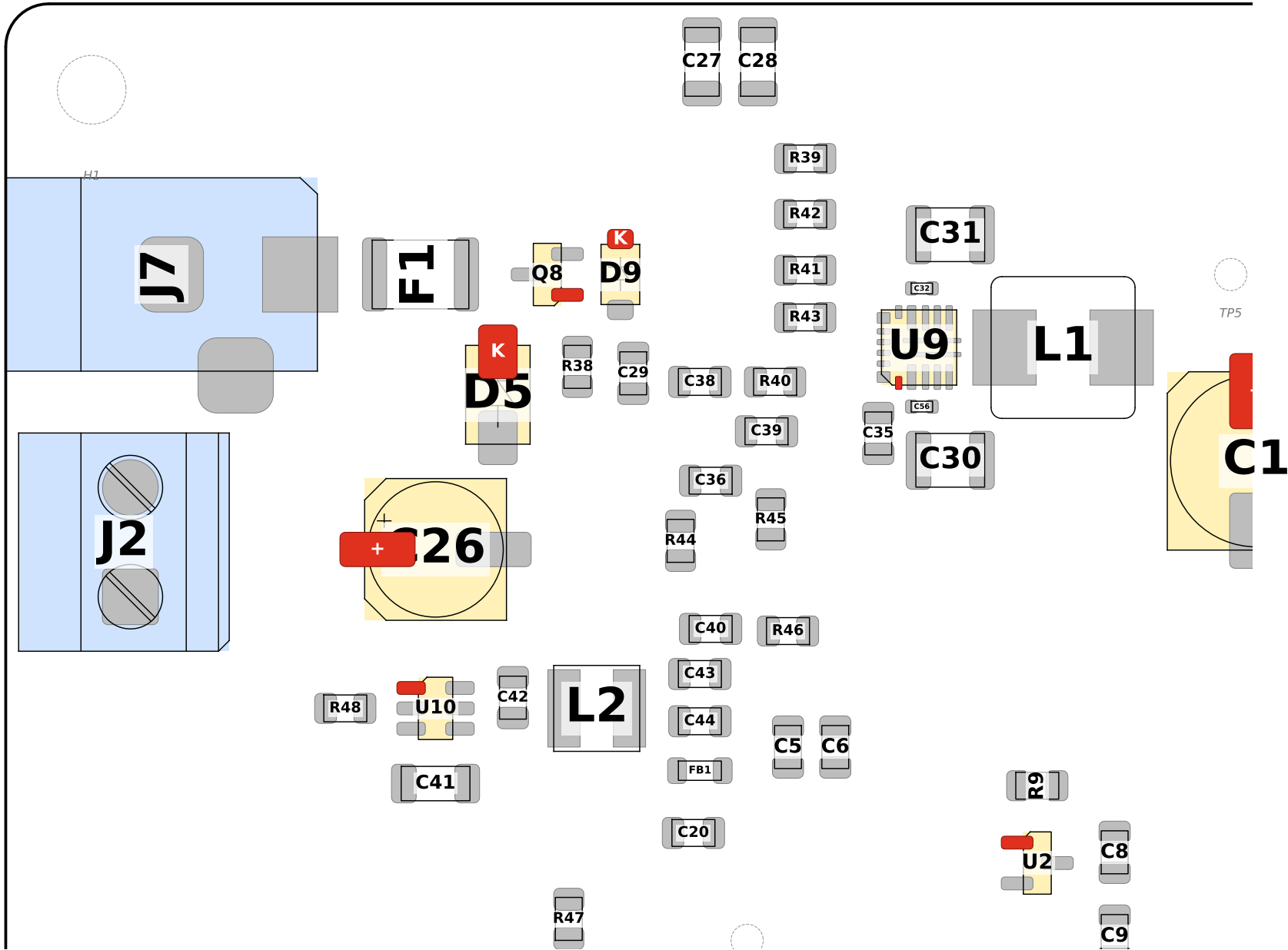
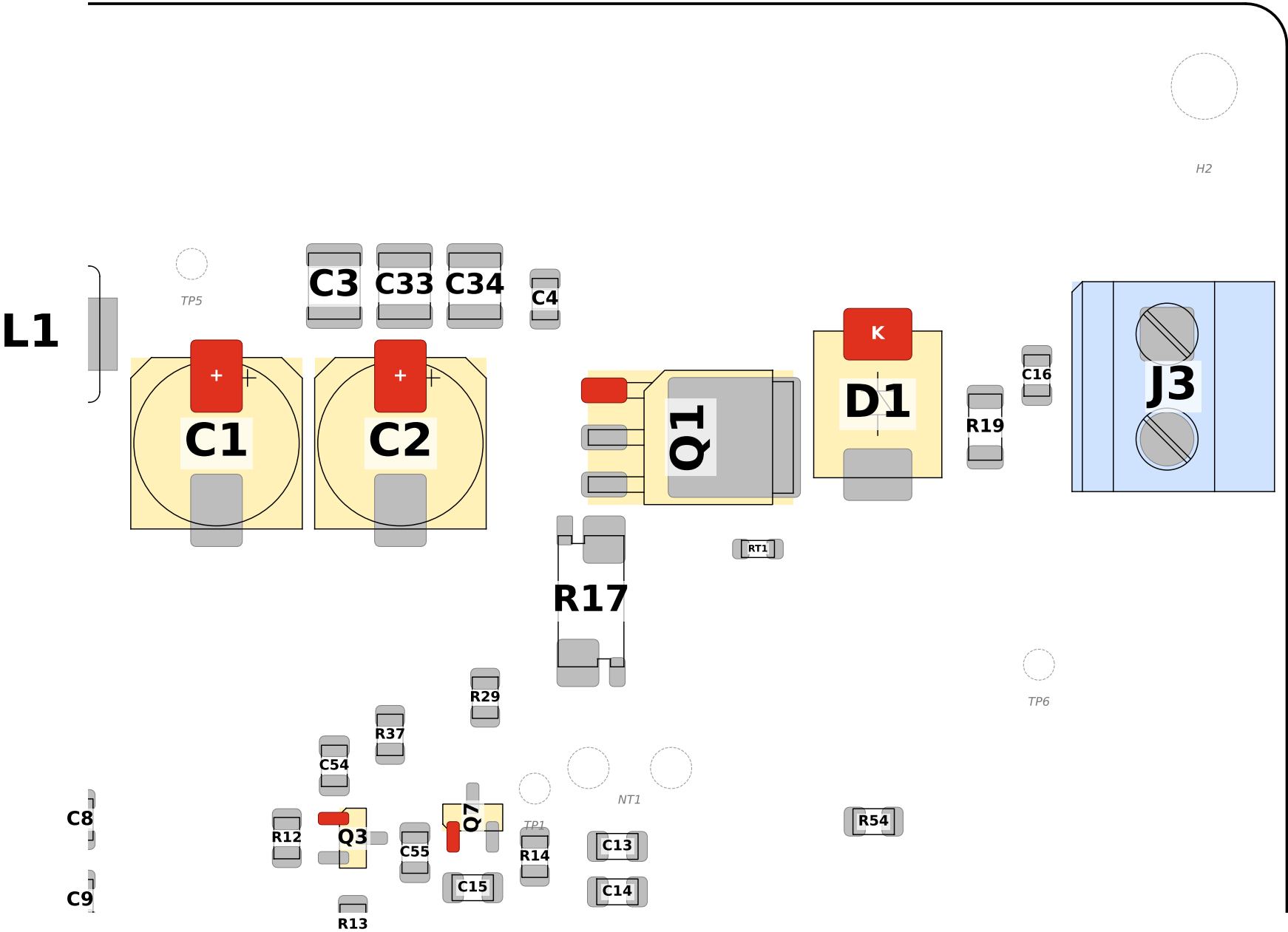


 Pin 1 / K = cathode / + = positive
 Polarized SMD (check orientation)
 Through-hole (THT)
 Pad





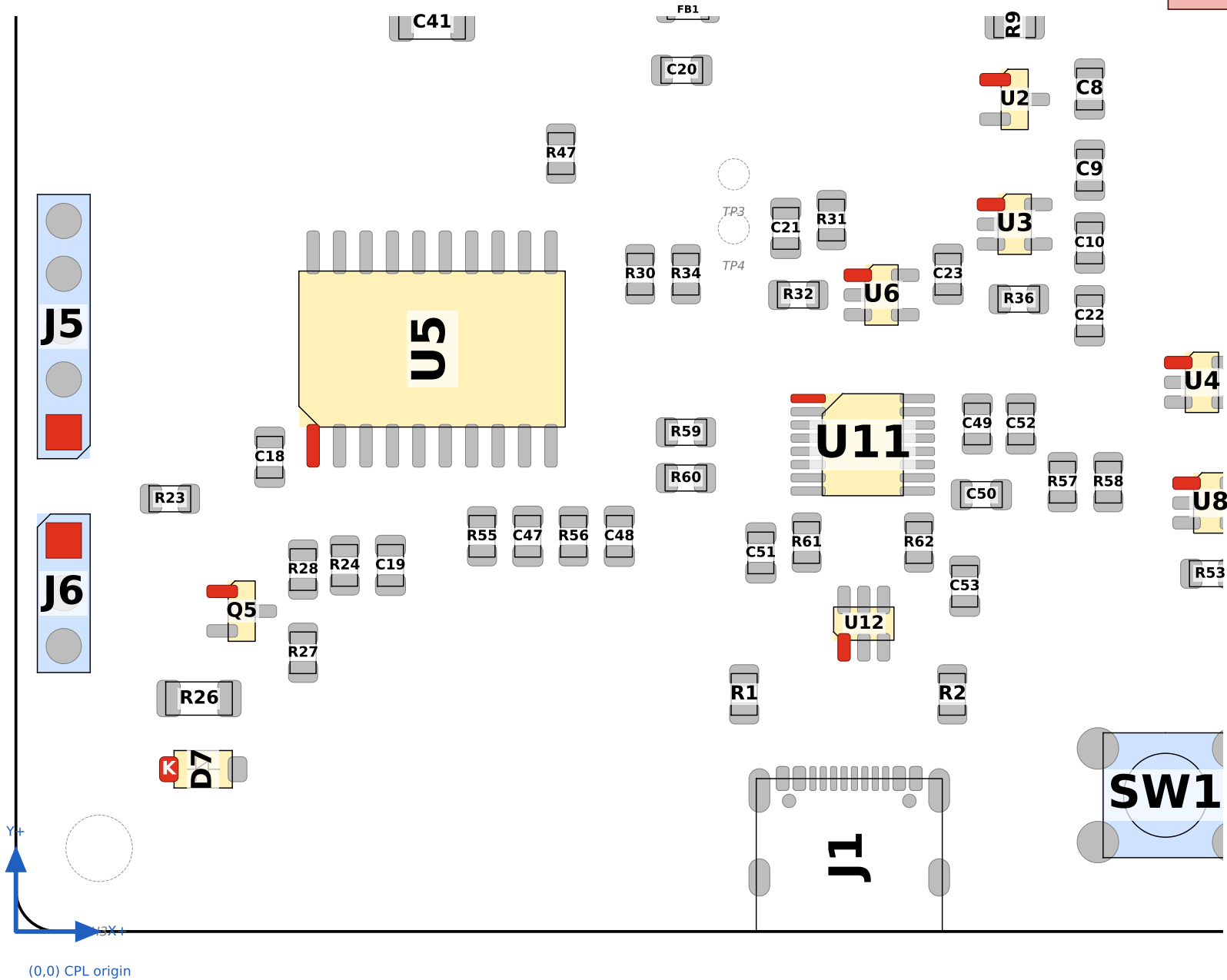
Pin 1 / K = cathode / + = positive Polarized SMD (check orientation) Through-hole (THT) Pad TP3



Pin 1 / K = cathode / + = positive Polarized SMD (check orientation) Through-hole (THT) Pad

LD-PULSE-6A rev B0 — Assembly drawing, TOP side (component side), viewed from top

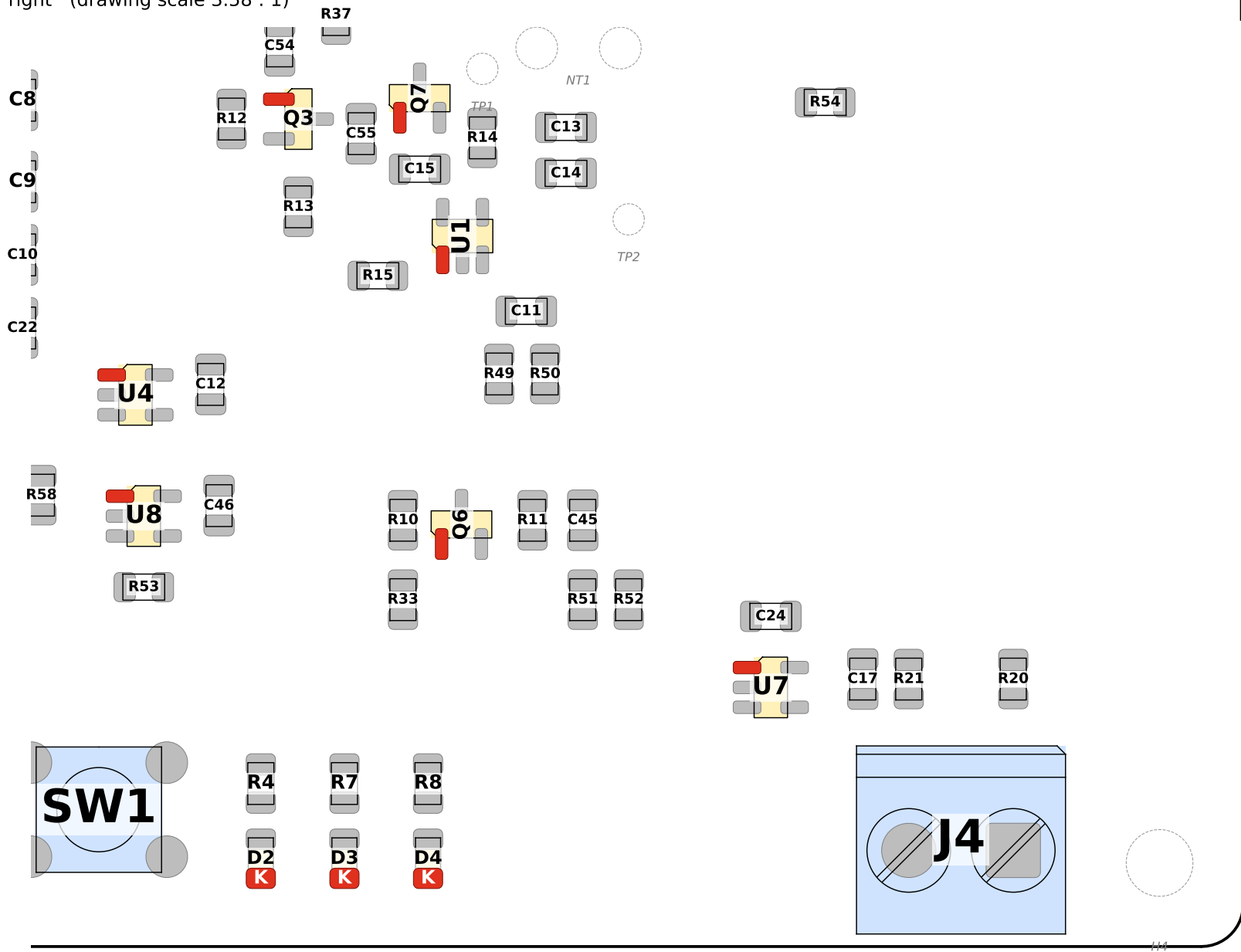
Detail 3 — lower left (drawing scale 3.58 : 1)



Pin 1 / K = cathode / + = positive Polarized SMD (check orientation) Through-hole (THT) Pad

LD-PULSE-6A rev B0 — Assembly drawing, TOP side (component side), viewed from top

Detail 4 — lower right (drawing scale 3.58 : 1)



Orientation check list and placement notes

Ref	Part	Package	Orientation rule
C1	16SVPG560M	CP_Elec_8x10	Polarized cap: '+' pad (red) = pad 1
C2	16SVPG560M	CP_Elec_8x10	Polarized cap: '+' pad (red) = pad 1
C26	EEE-HC1E470XP	CP_Elec_6.3x7.7	Polarized cap: '+' pad (red) = pad 1
D1	SS54	D_SMC	Diode: cathode band (K, red) = pad 1
D2	19-217/GHC-YR1S2/3T	LED_0805_2012	LED: cathode (K, red) = pad 1
D3	19-217/R6C-AL1M2VY/3T	LED_0805_2012	LED: cathode (K, red) = pad 1
D4	19-217/Y2C-CQ2R2L/3T	LED_0805_2012	LED: cathode (K, red) = pad 1
D5	SMAJ15A	D_SMA	Diode: cathode band (K, red) = pad 1
D7	MMSZ5240B-7-F	D_SOD-123	Diode: cathode band (K, red) = pad 1
D9	MMSZ5242B-7-F	D_SOD-123	Diode: cathode band (K, red) = pad 1
J2	MKDS 1,5/2-5,08	MKDS-1,5-2-5.08_1x02	THT terminal block: wire entry faces board edge
J3	MKDS 1,5/2-5,08	MKDS-1,5-2-5.08_1x02	THT terminal block: wire entry faces board edge
J4	PT 1,5/ 2-5,0-H	PT-1,5-2-5.0-H_1x02	THT terminal block: wire entry faces board edge
J5	-	PinHeader_1x05	THT pin header: square pad = pin 1 (red)
J6	-	PinHeader_1x03	THT pin header: square pad = pin 1 (red)
J7	PJ-002AH	BarrelJack	THT DC jack: plug opening at board edge
Q1	IRLR8726TRPBF	TO-252-3_TabPin2	Transistor: pin 1 (red) as drawn
Q3	NX3008NBK,215	SOT-23	Transistor: pin 1 (red) as drawn

Ref	Part	Package	Orientation rule
Q5	2N7002-7-F	SOT-23	Transistor: pin 1 (red) as drawn
Q6	NX3008NBK,215	SOT-23	Transistor: pin 1 (red) as drawn
Q7	NX3008NBK,215	SOT-23	Transistor: pin 1 (red) as drawn
Q8	DMP3099L-7	SOT-23	Transistor: pin 1 (red) as drawn
SW1	-	SW_PUSH_6mm	THT 6x6 mm tact switch, pins fit one way
U1	OPA365AIDBVR	SOT-23-5	IC: pin 1 dot / chamfer at red pad
U2	LM4040DIM3-2.5/NOPB	SOT-23	IC: pin 1 dot / chamfer at red pad
U3	SN74LVC1G08DBVR	SOT-23-5	IC: pin 1 dot / chamfer at red pad
U4	SN74LVC1G00DBVR	SOT-23-5	IC: pin 1 dot / chamfer at red pad
U5	PIC16F18346-I/SO	SOIC-20W_7.5x12.8mm	IC: pin 1 dot / chamfer at red pad
U6	SN74LVC1G17DBVR	SOT-23-5	IC: pin 1 dot / chamfer at red pad
U7	SN74LVC1G17DBVR	SOT-23-5	IC: pin 1 dot / chamfer at red pad
U8	SN74LVC1G00DBVR	SOT-23-5	IC: pin 1 dot / chamfer at red pad
U9	TPS54824RNVR	VQFN-HR-18_3.5x3.5mm	IC: pin 1 dot / chamfer at red pad
U10	AP63205WU-7	TSOT-23-6	IC: pin 1 dot / chamfer at red pad
U11	FT230XS-R	SSOP-16_3.9x4.9mm	IC: pin 1 dot / chamfer at red pad
U12	USBLC6-2SC6	SOT-23-6	IC: pin 1 dot / chamfer at red pad

Placement

- All parts are on the TOP side. Bottom side: no parts. SMD: 138 parts · THT: 7 parts (J2, J3, J4, J5, J6, J7, SW1) · total in CPL: 145.
- Positions and rotations in Id6a_CPL_jlcpcb.csv match this drawing exactly (checked part by part). Rotation uses the KiCad convention; if your machine library uses another zero angle, please confirm the orientation of the parts in the table above against this drawing.
- U9 (TPS54824RNVR, VQFN-HR-18 3.5 x 3.5 mm, 0.5 mm pitch) has no exposed pad; stencil openings as in F_Paste. C32 / C56 are 0402.

Do not place (shown dashed / grey italic)

- TP1-TP6: bare copper test pads. NT1: copper net tie (part of the PCB). H1 -H4: M3 mounting holes.

Programming

- U5 (PIC16F18346) is programmed by the customer through J5 (ICSP). No programming at the factory.